Microscopic examination of the grafts shows an astonishing viability. It seemed to be of little consequence whether the graft was half an inch or 3 inches in diameter.

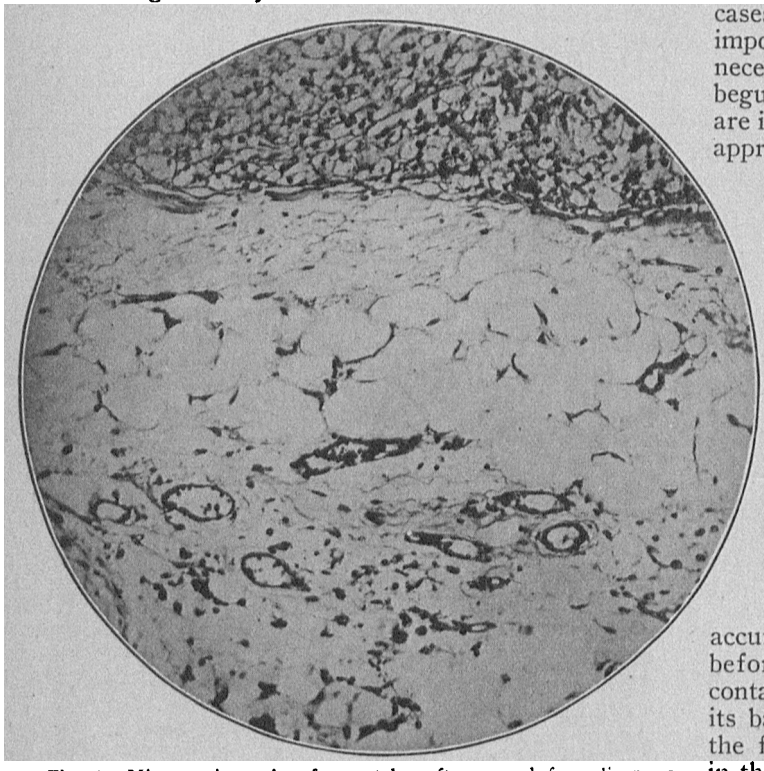

Fig. 4.—Microscopic study of omental graft removed from liver, as shown in Figure 3, × 160; section removed after two months.

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A METHOD OF CONTROLLING HEMORRHAGE IN CHOLECYSTECTOMY

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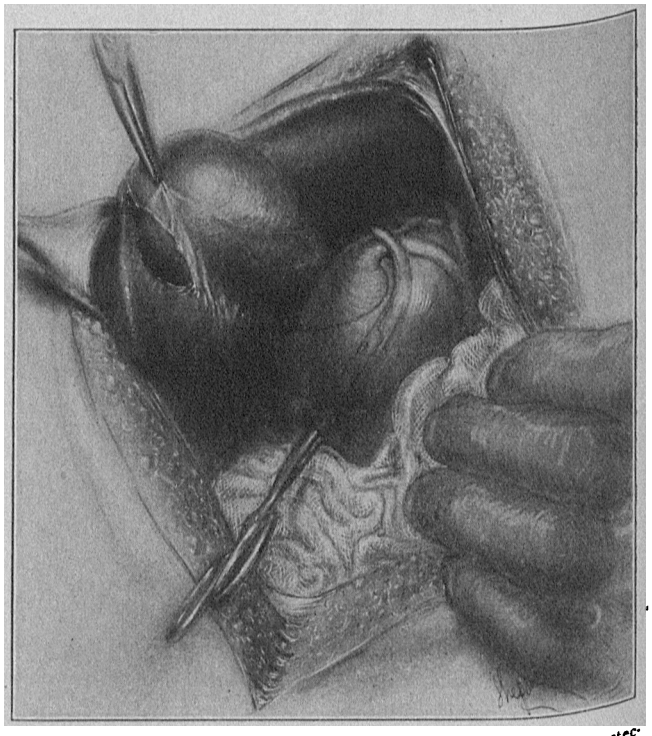
The difficulties experienced in the operation of cholecystectomy, with their consequent increase in the operative risk, are responsible to a considerable extent for the wide variance in opinion as to the advisability of its performance in place of chylecystotomy. The general adaptation of the Bevan curved or oblique incisions beginning above near the xiphoid, permitting of outward rotation of the liver with consequent exposure of the region of the ducts, has greatly improved the operative results. The removal of the gallbladder by starting at the cystic duct has become the routine procedure wherever possible in a great many clinics. Its chief advantage lies in the better hemostasis during the separation of the gallbladder from the liver, since the most troublesome bleeder, the cystic artery, is clamped, cut and ligated along with the cystic duct as the first step in the removal. The oozing which occurs from the surface of the liver as the gallbladder is cut away is usually readily controlled by the suture with which the gallbladder sulcus is closed. Separate ligation of bleeding points or a gauze pack left in place may be necessary in some cases.

This is doubtless the best plan of procedure when it can be carried out. Yet a great many surgeons find it difficult or still prefer to begin the removal of the gallbladder at the fundus. Even in the hands of its most skilled advocates it has to be abandoned in certain cases in which adhesions and liver fixation make it impossible to obtain sufficient exposure. When by necessity or choice the removal of the gallbladder is begun at the fundus, the branches of the cystic artery are injured repeatedly as the main trunk of the vessel is approached. This frequently results in an annoying hemorrhage, which can be avoided in the following way:

After separation of adhesions about the gallbladder and its pedicle, if any are present, the cystic duct and artery region are definitely located by inspection, if possible, and, if not, by careful palpation and a curved forceps applied at the point at which it is desired to amputate and ligate. This will prevent any hemorrhage from the cystic artery, and the gallbladder can be removed from the fundus to the neck with only such minor disturbance from bleeding as occurs from the liver surface. After separation of the gallbladder, if the clamp is not on the pedicle at the point at which it is desired to amputate, it may be unlocked and readjusted. This will usually be found unnecessary, as by inspection or accurate palpation the forceps can be properly placed before the separation is begun. The peritoneal fold containing the duct and artery may be perforated at its base and separated from the liver by the point of the forceps, after which the entire pedicle is grasped in the forceps. This facilitates ligation after the gallbladder has been cut away.

An objection brought against this procedure was that in all cases in which a curved forceps could be placed on the pedicle, it ought to be possible to begin the removal of the gallbladder at this point. This objection does not hold, as the forceps can be applied after separating the adhesions in the most buried cases.



Forceps in position on artery and duct at beginning of cholecystectomy.

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